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A method for inactivating a target cell in the presence of T cells comprising bringing the target cell and a T cell in contact with a superantigen in the presence of an immune modulator wherein at least one of the superantigen and immune modulator is conjugated to a targeting moiety.

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2.

The method of claim ³⁵~~1~~, wherein the superantigen and immune modulator are both conjugated to the same targeting moiety, the conjugate being a triple conjugate.

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3.

The method of claim ³⁵~~1~~, wherein the superantigen and targeting moiety are conjugated.

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R1.126 38.
4.

The method of claim ³⁷~~3~~, wherein the immune modulator is not conjugated to the targeting moiety.

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5.

The method of claim ³⁵~~1~~, wherein the target cell is inactivated in vivo in an individual having a disease associated with the target cell.

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The method of claim ³⁹~~5~~, wherein the disease is cancer.

R1.126 41.
7.

The method of claim ³⁵~~1~~, wherein the targeting moiety is selected from the group consisting of an antibody, an antigen-binding fragment of an antibody, an Fab fragment of an antibody, an Fab₂ fragment of an antibody, or a single chain antibody.

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The method of claim ~~1~~, wherein the superantigen is modified to have a decreased ability to bind to MHC class II antigen compared to the corresponding wild type superantigen.

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The method of claim ~~1~~, wherein the superantigen is modified to have decreased seroreactivity or immunogenicity in human sera compared to the corresponding wild type superantigen.

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The method of claim ~~1~~, wherein the superantigen is chimeric comprising sequences derived from two or more wild type superantigens.

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The method of claim ~~1~~, wherein the immune modulator is selected from the group consisting of cytokines, chemokines, and extracellular parts of lymphocyte bound receptors and ligands.

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The method of claim ~~1~~, wherein the immune modulator is IL-2.

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The method of claim ~~1~~, wherein the immune modulator is an extracellular part of a B7 molecule.

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⁴⁸/₁₄

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The method of claim ~~13~~, wherein part of the B7 molecule is selected from the group consisting of CD80 and CD86.

R1.126 49.
15.

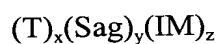
The method of claim ³⁵1, wherein the immune modulator has been modified to show a decreased affinity for a lymphocyte receptor, compared to the affinity of the corresponding native form.

R1.126 50.
16.

The method of claim ³⁵1, wherein the targeting moiety is an immune modulator.

R1.126 51.
17.

A superantigen conjugate comprising the formula:



wherein T is a targeting moiety, Sag is a superantigen, IM is an immune modulator that is not a superantigen;

y > 0;

and z > 0.

R1.126 52.
18.

The superantigen conjugate of claim ⁵¹17, wherein x is between 0 and 10.

R1.126 53.
19.

The superantigen conjugate of claim ⁵¹17, wherein y is between 1 and 10.

R1.126 54.
20.

The superantigen conjugate of claim ⁵¹17, wherein z is between 1 and 10.

R1.126 55.
21.

The superantigen conjugate of claim ⁵¹17, wherein x, y and z are each 1-3.

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22.

The superantigen conjugate of claim ⁵¹17, wherein T comprises at least at T' and a T'', the superantigen is fused C-terminally to T' and the immune modulator is fused C-terminally to T''.

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23.

The superantigen conjugate of claim ⁵¹17, wherein the targeting moiety is selected from the group consisting of an antibody, an antigen-binding fragment of an antibody, an Fab fragment of an antibody, an Fab₂ fragment of an antibody, or a single chain antibody.

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24.

The superantigen conjugate of claim ⁵¹17, wherein the superantigen is modified to have a decreased ability to bind to MHC class II antigen compared to the corresponding wild type superantigen.

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25.

The superantigen conjugate of claim ⁵¹17, wherein the superantigen is modified to have decreased seroreactivity immunogenicity in human sera compared to the corresponding wild type superantigen.

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26.

The superantigen conjugate of claim ⁵¹17, wherein the superantigen is chimeric comprising sequences derived from two or more wild type superantigens.

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27.

The superantigen conjugate of claim ⁵¹17, wherein the immune modulator is selected from the group consisting of cytokines, chemokines, and extracellular parts of lymphocyte bound receptors and ligands.

R1.126 62.
28.

The superantigen conjugate of claim ⁵¹17, wherein the immune modulator is IL-2.

R1.126 63.
29.

The superantigen conjugate of claim ⁵¹17, wherein the immune modulator is an extracellular part of a B7 molecule.

R1.126 64.
30.

The superantigen conjugate of claim ⁶²28, wherein part of the B7 molecule is selected from the group consisting of CD80 and CD86.

R1.126 65.
31.

The superantigen conjugate of claim ⁵¹17, wherein the immune modulator has been modified to show a decreased affinity for a lymphocyte receptor, compared to the affinity of the corresponding native form.

R1.126 66.
32.

The superantigen conjugate of claim ^{5b}22, wherein the superantigen is Staphylococcal enterotoxin A, T' is the C_H1 domain of C215 Fab, T'' is the light chain of C215 antibody, and the immune modulator is IL-2.

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33.

The superantigen conjugate of claim ^{5b}22, wherein the superantigen is fused to T' via a flexible hydrophilic amino acid linker B of 3-11 amino acid residues, and the immune modulator is fused to T'' via a hydrophilic and neutral or positively charged amino acid linker Q of 10-20 amino acid residues.

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34.

The superantigen conjugate of claim ⁶⁷~~33~~, wherein B is selected from the group consisting of Gly-Gly-Pro and Pro-Ala-Ser-Gly-Gly-Gly-Gly-Ala-Gly-Gly-Pro (SEQ ID NO: 19) and Q is selected from the group consisting of Gly-Pro-Arg-Gln-Ala-Asn-Glu-Leu-Pro-Gly-Ala-Pro-Ser-Gln-Glu-Glu-Arg (SEQ ID NO: 23), Gly-Pro-Arg-Gln-Ser-Asn-Glu-Thr-Pro-Gly-Ser-Pro-Ser-Gln-Glu-Glu-Arg (SEQ ID NO: 20), Gly-Pro-Arg-Gln-Ala-Lys-Thr-Leu-Pro-Gly-Ala-Pro-Ser-Gln-Thr-Thr-Arg (SEQ ID NO: 21) and Gly-Pro-Thr-Glu-Ala-Asp-Glu-Leu-Pro-Gly-Ala-Pro-Ser-Glu-Glu-Glu-Tr (SEQ ID NO: 22).

R1.126 69.
35.

The superantigen conjugate of claim ⁵¹~~17~~, wherein $x = 0$, $y = 1-3$ and $z = 1-3$.

R1.126 70.
36.

A DNA molecule encoding a superantigen and an immune modulator that is not a superantigen.

R1.126 71.
37.

The DNA molecule of claim ⁷⁰~~36~~, wherein the immune modulator is IL-2.

R1.126 72.
38.

The DNA molecule of claim ⁷⁰~~36~~, wherein the DNA molecule is in the form of a bicistronic construct in which:

a first cistron contains a sequence which encodes a superantigen; and

a second cistron contains a sequence which encodes an immune modulator.

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39.

The DNA molecule of claim ⁷⁰~~36~~, wherein the superantigen encoded has been modified from wild type and has a modified ability to bind to MHC class II antigen compared to the corresponding wild type superantigen.

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40.

The DNA molecule of claim ⁷⁰36, wherein the superantigen encoded has been modified from wild type and has a decreased seroreactivity immunogenicity in human sera compared to the corresponding wild type superantigen.

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41.

The DNA molecule of claim ⁷⁰36, wherein the immune modulator encoded is an extracellular part of a B7 molecule and is selected from the group consisting of CD80 and CD86.

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42.

A DNA molecule encoding a superantigen, an immune modulator that is not a superantigen, and a targeting moiety.

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43.

A pharmaceutical composition comprising a superantigen, an immune modulator, and a targeting moiety, wherein at least one of the superantigen and immune modulator is conjugated to the targeting moiety.

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44.

The pharmaceutical composition of claim ⁷⁷43, wherein the targeting moiety is selected from the group consisting of an antibody, an antigen-binding fragment of an antibody, an Fab fragment of an antibody, an Fab₂ fragment of an antibody, or a single chain antibody.

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45.

The pharmaceutical composition of claim ⁷⁷43, wherein the superantigen is modified to have a decreased ability to bind to MHC class II antigen compared to the corresponding wild type superantigen.

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48.

The pharmaceutical composition of claim ~~48~~⁷⁷, wherein the superantigen is modified to have decreased seroreactivity immunogenicity in human sera compared to the corresponding wild type superantigen.

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49.

The pharmaceutical composition of claim ~~49~~⁷⁷, wherein the superantigen is chimeric comprising sequences derived from two or more wild type superantigens.

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The pharmaceutical composition of claim ~~50~~⁷⁷, wherein the immune modulator is selected from the group consisting of cytokines, chemokines, and extracellular parts of lymphocyte bound receptors and ligands.

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51.

The pharmaceutical composition of claim ~~51~~⁷⁷, wherein the immune modulator is IL-2.

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52.

The pharmaceutical composition of claim ~~52~~⁷⁷, wherein the immune modulator is a part of the B7 molecule selected from the group consisting of CD80 and CD86.

REMARKS

Please substitute and examine the above-presented claims for those pending in the PCT application. Please begin numbering with the number 1. The above-presented claims represent rewritten claims of the PCT application in U.S. format. No new matter has been added.